

Listing and Amendments to the Claims

This listing of claims will replace all previous versions and listings of claims in this application:

- 1.(currently amended) A method of operating a communication system comprising a primary station-~~(10)~~ and a plurality of secondary stations-~~(12a,12b,12c)~~, the method comprising:
the primary station-~~(10)~~ exchanging radio messages-~~(38)~~ with the secondary stations over a number of radio channels-~~(14a,14b)~~ in accordance with a predetermined protocol-~~(36)~~,
monitoring the capacity of said channels; and
~~controlling the registration of at least one secondary station to a channel used by at least one enquiring secondary station-(12a)~~ at least in part in dependence on said monitored capacity of said channels.
- 2.(currently amended) A method according to claim 1, wherein the monitoring of channel capacity comprises:
comparing the number of secondary stations-~~(12a,12b,12c)~~ registered per channel-~~(14a,14b)~~ against a predetermined threshold, and
blocking registration for those channels having a number of secondary stations registered per channel equal to or above the predetermined threshold.
- 3.(currently amended) A method according to claim 2, wherein ~~the a~~ monitored channel-~~(14b)~~ having the lowest number of registered secondary stations-~~(12c)~~ is used to register an enquiring secondary station.
- 4.(currently amended) A method according to claim 1, wherein beacon signals-~~(40)~~ are transmitted on each radio channel-~~(14a,14b)~~, and wherein the capacity of each channel is monitored by monitoring the number of time slots-~~(42)~~ available per frame time for that channel.
- 5.(currently amended) A method according to claim 4, wherein ~~the an~~ enquiring secondary station requesting guaranteed time slots-~~(46)~~ is allocated a radio channel having available unused timeslots for said request.

6.(currently amended) A communication system comprising a primary station-~~(10)~~ and a plurality of secondary stations-~~(12a,12b,12c)~~, wherein the primary station-~~(10)~~ has means-~~(29)~~ for exchanging radio messages-~~(38)~~ with the secondary stations over a number of radio channels in accordance with a predetermined protocol, means-~~(29,27)~~ for monitoring the capacity of said channels and means-~~(29,25,27)~~ for controlling registration of at least one secondary station to a the-channel used by at least one enquiring secondary station-at least in part in dependence on said monitored capacity of said channels.

7.(currently amended) A primary station-~~(10)~~ for use in a communications system comprising a plurality of secondary stations, wherein the primary station has means-~~(29)~~ for exchanging radio messages-~~(38)~~ with the secondary stations over a number of radio channels in accordance with a predetermined protocol, means-~~(29,27)~~ for monitoring the capacity of said channels and means-~~(29,25,27)~~ for controlling registration of at least one secondary station to a the-channel used by at least one enquiring secondary station-at least in part in dependence on said monitored capacity of said channels.

8.(currently amended) A primary station as claimed in claim 7, wherein the means for exchanging radio messages comprises a communication module-~~(29)~~ having a plurality of transceivers-~~(29a,29b,29c)~~ coupled-~~(35,27)~~ to said monitoring and control means-~~(29)~~, and wherein each transceiver operates a single radio channel.

9.(currently amended) A primary station as claimed in claim 7 or claim 8, wherein the monitoring means-~~(29)~~ monitors the available timeslots-~~(42)~~ between periodic beacon signals-~~(40)~~ transmitted by transceivers on respective channels, and wherein the control means-~~(29)~~ allocates a radio channel having available unused timeslots to the at least one enquiring secondary station.

10.(currently amended) A primary station-~~(10)~~ as claimed in claim 7, wherein the predetermined protocol is the ZigBee radio protocol.

11.(currently amended) A computer program-~~(25)~~ comprising code that when executed on a programmable device forming a primary station causes it to carry out the steps of claim 1.

| 12.(currently amended) A computer program-~~(25)~~ comprising code that when executed on
a computer linked to a primary station causes it to carry out the steps of claim 1.

| 13.(currently amended) A computer program-~~(25)~~ on a carrier-~~(24)~~ carrying code that when
executed on a programmable device forming a primary station causes it to carry out the steps of
claim 1.

| 14.(currently amended) A computer program-~~(25)~~ on a carrier ~~24~~-carrying code that when
executed on a computer linked to a primary station causes it to carry out the steps of claim 1.

| 15.(new) The primary station of claim 7 operating a plurality of ZigBee piconets simultaneously
in the same location, each piconet operating on a separate radio channel, wherein the means for
monitoring includes a microprocessor to obtain information about each piconet and monitor a
number of members of each piconet, and which radio channels are in use.